

JOB SHEET 16

Inspect, Drain, Refill, and Flush a Manual Transmission/Transaxle

Name: _____ Station: _____ Date: _____

NATEF Correlation

This Job Sheet addresses the following NATEF task(s):

- 3.A.5** Diagnose fluid loss, level, and condition concerns; determine necessary action. (P-1)
- 3.A.6** Drain and fill manual transmission/transaxle and final drive units. (P-1)

Performance Objective(s)

Upon completion of this Job Sheet, you will be able to inspect a manual transmission/transaxle for leaks and the condition of the fluid, as well as drain and refill manual transmission/transaxles.

Tools and Materials

Shop rag
Correct type gear oil/lubricant
Service manual
Technician's tool set
Gasket scraper
RTV gasket maker
Vehicle lift
Torque wrench

Protective Clothing/Equipment

Goggles or safety glasses with side shields

Describe the vehicle being worked on:

Year	Make	Model	VIN	Engine type and size

PROCEDURE

1. Raise the vehicle on the lift safely and inspect the manual transmission/transaxle for fluid leaks. Explain the results of your test.

2. If a leak is found, what appears to be the cause?
-

3. Check the seals and housing units. Are they damaged in any way?
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4. Locate either the dipstick or fill plug. Check the condition and level of the fluid. Does it appear to be in need of replacing? Explain how the fluid's condition became that way.
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5. Explain what is covered in the service manual pertaining to manual transmission/transaxle fluid maintenance and service.
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6. Locate the drain plug for the transmission/transaxle.

Task Completed _____

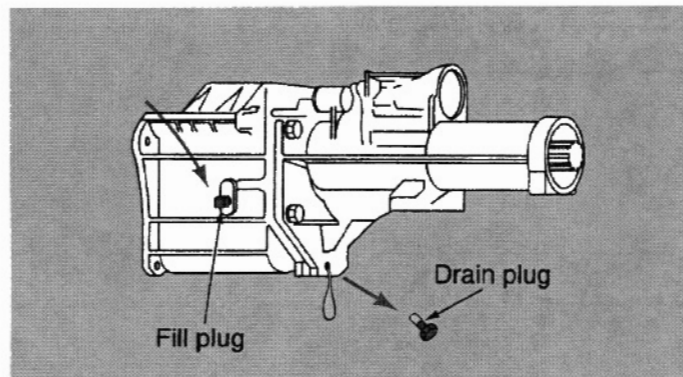


Figure 14.21 Location of manual transmission fill and drain plugs.

7. Position the drain pan to catch the fluid. Remember that the flow pattern will change as more fluid is drained.

Task Completed _____

8. After the fluid has been drained, inspect the fluid and the drain plug for signs of metal wear and other particles. Describe what you found.
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9. If you did find metal shavings on the drain plug or in the fluid, what might that indicate?
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10. How might the color of the metal shavings give you an indication of a problem?
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11. Reinstall the drain plug and torque to specifications.

Task Completed _____

12. What type of fluid should be used to fill the transmission/transaxle?

13. Locate the fill plug. Refill the transmission/transaxle until it reaches the level specified by the manufacturer. If the unit you are working on does not have a dipstick, explain how you checked for the proper level of fluid. Torque the fill plug to specification if applicable.

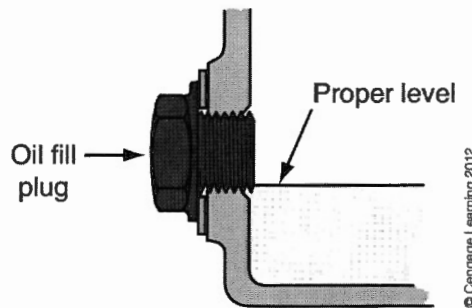


Figure 14.23 The fluid level should be at the bottom of the fill plug hole.

14. Test-drive the vehicle and note any noises or problems.

Problems Encountered

INSTRUCTOR EVALUATION

- ☐ 4 Mastered Task
- ☐ 3 Able to Perform Task Independently; Some Additional Training Suggested
- ☐ 2 Able to Perform Task with Close Supervision; Requires Additional Training
- ☐ 1 Unable to Perform Task
- ☐ 0 Not Attempted

Comments

Instructor Name: _____ Date: _____

Instructor Signature: _____